



Memorandum

*To: Stephanie Vaughn (USEPA)
Elizabeth Buckrucker (USACE)*

*From: Sharon Budney (CDM)
George Molnar (CDM)*

Date: December 17, 2009

*Re: Status Report (October, November, and December 2009)
CPG Oversight of Physical Water Column Monitoring
Lower Passaic River Restoration Project*

On behalf of the United States Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (USACE), Kansas City District, CDM Federal Programs Corporation (CDM) is providing oversight of the Cooperating Parties Group (CPG) remedial investigation/feasibility study (RI/FS) field activities associated with water column monitoring and the collection of physical data in the Lower Passaic River (LPR).

October, 2009

The following summarizes oversight observations of in-river field work conducted October 12 and 13, 2009 at river mile (RM) locations 1.4, 4.2, 6.7, 10.2, and 13.5. Photographs of CPG activities in support of the physical water column monitoring (PWCM) can be found in Attachment 1 and copies of the logbook notes are included in Attachment 2. All samples were collected in accordance with the QAPP, except for the minor deviations noted below:

- Naming system of samples has changed. Original naming system was based on samplers facing downstream and beginning at the left bank identifying the samples as P1 through P3. The revised system faces upstream and begins with P1 on left bank. In other words, P2 is still located between P1 and P3, but are now opposite of what was originally planned.
- River mile designation for 4.3 was changed to 4.2; target locations remained unchanged as RM 4.2 was the closest RM to target coordinates.

Monday, October 12, 2009. In-river work in support of the PWCM was conducted via two teams; one team above Dundee Dam and the other at five locations below. The later was observed by CDM oversight personnel. No oversight activities were conducted above Dundee Dam.

Oversight staff observed the deployment of the conductivity, turbidity, and depth/optical backscatter (CTDB) and acoustic Doppler current profiler (ADCP) array at RM 6.7; other arrays were deployed over the past weekend. CDM oversight staff also observed the collection of surface and bottom water samples at RM locations 1.4, 4.2, 6.7, 10.2, and 13.5 for suspended solids analysis.

Tuesday, October 13, 2009. In-river work in support of the PWCM was conducted via two teams; one team at RM 10.2 and 13.5, and the other at RMs 1.4, 4.2, and 6.7. The later was observed by CDM oversight personnel. No oversight activities were conducted at the other locations.

Oversight staff observed ADCP transect surveys and the collection of surface and bottom water samples at each location for suspended solids, and where selected, particulate organic carbon (POC), and dissolved organic carbon (DOC) analysis at RM 1.4, 4.2, and 6.7. Samples were collected along three predetermined locations along each transect. All surveys and samples were collected during both ebb and flood tides.

The other team working at RM 10.2 and 13.5 beached their boat at the confluence of the Second River. Crews and equipment were unharmed and remained there until the incoming tide freed them.

All activities were completed until the next scheduled maintenance check.

November, 2009

The following summarizes oversight observations of in-river field work conducted November 9 through 11, 2009 at RM locations 1.4, 4.2, 6.7, 10.2, and 13.5. Photographs of CPG activities in support of the PWCM can be found in Attachment 1 and copies of the logbook notes are included in Attachment 2. All procedures observed were conducted in accordance with the QAPP.

Monday, November 9, 2009. In-river support of the PWCM was conducted at RM 1.4, 6.7, and 10.2. Oversight staff observed the retrieval and redeployment of buoys and moorings and the collection of surface and bottom water samples at each location for suspended solids. As per the QAPP, samples were collected before retrieval and after redeployment.

- Noted Issues: The buoy-mounted YSI instrument was replaced at RM 10.2 due to a potentially malfunctioning turbidity sensor.

Calibration of instruments prior to deployment were not observed. Instruments come factory calibrated and the calibration was verified during mobilization the previous day. Those instruments left *in-situ* were not calibrated upon retrieval unless there were inconsistencies between buoy and mooring-mounted units. The newly installed unit as noted above did have its turbidity calibration verified prior to deployment. With the exception of the one turbidity sensor all *in-situ* instruments appeared to be functioning fine.

Tuesday, November 10, 2009. In-river work in support of the PWCM was conducted at RM 4.2 and 13.5. Oversight staff observed the retrieval and redeployment of buoys and moorings and the collection of surface and bottom water samples at each location for suspended solids. As per the QAPP, samples were collected before retrieval and after redeployment. All *in-situ* instruments were functioning fine.

Sampling and the ADCP transect survey above the Dundee Dam was also completed. No oversight personnel were present for that activity.

Wednesday, November 11, 2009. In-river work in support of the PWCM was conducted via two teams; one team at RM 10.2 and 13.5 and the other at RMs 1.4, 4.2, and 6.7. The later was observed by CDM oversight personnel. No oversight activities were conducted at the other locations.

Oversight staff observed ADCP transect surveys and the collection of surface and bottom water samples at RMs 1.4, 4.3, and 6.7 for suspended solids, and where selected, POC and DOC analysis. Samples were collected along three predetermined locations along each transect. All surveys and samples were collected during both ebb and flood tides.

Oversight of water sampling at RM 6.7 during the flood tide sampling event was not observed; however, the transect survey at this location was. Sampling was not observed due to unexpected flow of incoming tides. After the survey, the boat needed to depart this location for the Passaic River yacht club or be stranded upstream of Newark for several hours due to insufficient bridge clearance. After the survey, crews departed the area and the team based from the CPG facility sampled at RM 6.7.

All activities were completed until the next scheduled maintenance check.

December, 2009

The following summarizes oversight observations of in-river field work conducted December 14 through 16, 2009 at RM locations 1.4, 4.2, 6.7, 10.2, and 13.5. Photographs of CPG activities in support of the PWCM can be found in Attachment 1 and copies of the logbook notes are included in Attachment 2. All procedures observed were conducted in accordance with the QAPP.

Monday, December 14, 2009. In-river work in support of the PWCM was conducted via two teams; one team at RM 10.2 and 13.5 and the other at RMs 1.4, 4.2, and 6.7. The later was observed by CDM oversight personnel. No oversight activities were conducted at the other locations.

Oversight staff observed ADCP transect surveys and the collection of surface and bottom water samples at each location for suspended solids, and where selected, POC and DOC analysis. Samples were collected along three predetermined locations along each transect. All surveys and samples were collected during both ebb and flood tides.

Following the ADCP survey and sampling, CDM oversight staff observed sample processing/packing for shipment at the CPG facility.

Tuesday, December 15, 2009. In-river work in support of the PWCM was conducted at RMs 6.7, 10.2, and 13.5. Oversight staff observed the retrieval of buoys and moorings and the collection of surface and bottom water samples at each location for suspended solids. As per the QAPP, samples were collected prior to retrieval. All *in-situ* instruments were functioning fine upon retrieval.

Sampling and the ADCP transect survey above the Dundee Dam was also completed. No oversight personnel were present for that activity.

Wednesday, December 16, 2009. In-river work in support of the PWCM was conducted at RMs 1.4 and 4.2. Oversight staff observed the retrieval of buoys and moorings and the collection of surface and bottom water samples at each location for suspended solids. As per the QAPP, samples were collected prior to retrieval. All *in-situ* instruments were functioning fine upon retrieval.

All activities in support of the Winter 2009 PWCM event are complete.

Attachment 1
Photographs of Physical Water Column Monitoring Activities



Photo 1. CTDB/ADCP array prior to deployment.



Photo 2. Conductivity, turbidity, and depth meter being deployed at RM 10.2 for sampling via mounted pump shown on the right of data sonde.



Photo 3. ADCP prior to deployment during a transect survey.



Photo 4. AECOM personnel collecting water sample at RM 1.4 for suspended solids analysis.



Photo 5. CTDB/ADCP array after retrieval.



Photo 6. Crew servicing the mooring-mounted ADCP after retrieval.



Photo 7. Hook used to drag river bottom for mooring and buoy anchor lines.



Photo 8. Buoys and CTDB/ADCP array moorings from RMs 6.7, 10.2, and 13.5 after retrieval. All instruments have been removed for downloading.

Attachment 2
Copies of Oversight Field Logbook Notes

Location Pasig River Yacht Club Date 10/12/09
 Project / Client LPR / USACE

0820 Get out door @ Pasig River Yacht Club. Mtg @ 0900 - thought someone would be here by now to mob for water column sampling. Weather sunny high 50's. while waiting @ reviews PRR.

0900 Ocean survey + AELCOM arrive on site. Folks beg to mob. Presenting 4rops from AELCOM - Marine Greenbelt Science + other + two OST. after deployment Marcher + Steve Depenak - there are two crews working today in support of this activity one crew is working above Parker Dam only. Yesterday deployed all reaches below dam except for one that what this crew will be doing today. @ the crew will deploy above dam today.

Photo 1 - deploying YSI @ RM 1.4

Photo 2 - acoustic deployer above.

Crews will grab samples @ each access below dam today. Tomorrow they will go back + run transects.

Location Pasig River Yacht Club Date 10/12/09
 Project / Client LPR / USACE

The sample have chag - looking up river left bank would be P3, right bank P1. - P1 & P2.

just a matter way across any. Sucks up @ downstream. A/50 if need weights may be added.

Photo 3 sampling water @ RM 1.4 3 ft below surface sample for SSC

Photo 4 - YSI

Photo 5 Bony bank location at ACD channel @ RM 4.3 facing downstream

Photo 6 & 7 YSI for deployment @ RM 4.2 facing right bank by soccer stadium. Calibration box between events.

Need to deploy array @ RM 6.7

Photo 8 & 9 deploying array @ RM 6.7 facing upstream

Photo 10 looking up water meter to dam @ RM 6.7

Photo 11 deploying array @ RM 6.7 facing upstream

Crews will collect deployment @ surface

Location Passamottet Yacht Date 10/2/09
 Project / Client LPR / USACE

+ bottom samples @ RM 12.7

1125 AS + AD (dup) 1128 for BS + BD (dup)

09A - E01 - T067 - P3 - AS

09A - E01 - T067 - P3 - AD

09A - E01 - T067 - P3 - BS

09A - E01 - T067 - P3 - DD

Photo 12 RM 12.2 being loaded

@ P1 (on left bank);

09A - E01 - T102 - P1 - AS 1152 sample 4.7

09A - E01 - T102 - P1 BS 1152 sample 1.2

1215 arrive @ RM 13.5

1220 collect surface sample @ RM 13.5

1222 collect depth sample @ RM 13.5

1230 Drop AECOM personnel off @

CPG dock - GM + OSI crews begin

drive back to Passamottet Yacht Club.

For tomorrow crews will meet @ yacht

club for 7 + head to lower 3

reaches. Boat that was abandoned

will be uper towed. After

finishing 1st round the boat will

return back to boat dock + protecting

head out @ 1300 to do other

sampling work.

10/2/09

Location Passamottet Yacht Club Date 10/2/09
 Project / Client LPR / USACE

No ² more early, single center zone
 will be for ebb tide, 1300. Another
 crews return to Passamottet Yacht
 club prep equipment for tomorrow.
 All equipment ^{09/1/09} ~~has~~ water gauge
 equipment has cam factory calibration.
 Oversight of field activity shows
 adherence to BAP w/ exception at
 when road to new location.

10/2/09

10/2/09

Location Water Column Monitoring Date 10/13/09
 Project / Client LPR/USACE

0640 Get arrivals @ Passaic River
 Yacht Club. Weather is forecasted
 to be partly sunny & in 60s

0645 SS arrivals

0720 AFCON arrives & conducts brief
 A+S mtg. - still trying to push forward.

0740 Arrive @ RM 4.2 & begin
 ADCP survey across pre determined
 line near center of GPS. When
 E road out shows high velocities
 near surface. Transoms are carried
 out and back up across channel.

This morning's survey conducted
 during ebb tide. At location

09A-E03-T014-P3 AS + BS
 crews also collecting samples
 for POC + DOC

0845 Arrive @ RM 4.2 & begin
 mobility for ADCP survey @ location

09A-E03-T042 P1 AS + BS collecting
 DOC + POC samples in addition to
 SS analysis samples there were

0904 @ AS + 0907 @ BS

Photo 3 depth profile & C/T meter

Location Water Column Monitoring Date 10/13/09
 Project / Client LPR/USACE

being in background is one landmark
 RM 4.2

0930 finish up @ RM 4.2

Photo 14 ADCP on boat

P3 @ RM 4.2 was collected @
 926 + 927 - AS + BS, P2 0916.2
 0918 - AS - BS

0945 arrive @ RM 6.2

09A-E03-T067-P3 AS + BS

Took a dup for just SS,
 also did POC + DOC
 09A-E03-T067-P3 BS

1010 collect AS + 1012 collect BS

After finishing @ RM 6.2 boat
 needed to rescue a few birds
 as it ran aground.

Photo 15 Sediment core in
 Newark Bay sp. facing upstream
 1115 arrive @ yacht club. Trying
 to verify some road line rlys
 unable to do as everything gets
 dumped & correlated into the
 computer.

Photo 16 10/13/09

Location Water Column Monitoring Date 10/13/09Project / Client LPR / USACE

09A-EO3-T007-P3 AS/BS

@ depth 2.01 ft - 59.54°F, 2.303 ppt,
Turb 23.33/10.@ depth 3.67 ft - 59.48°C, 1.935 ppt,
20.9659 Turb1135 plan ends up / then - crews depart
yacht club for 8 w/ shuttle boat
grabbing samples & going back to the
facility1215 crew departs yacht club
for flood tide sampling. Bill / Lea

w/ Dermontau is on board

1230 crews arrive @ RM 1.4

to begin flood tide sample.

Loc P1 in the transient lines were

1258 + 1300

Photo 16 sample @ P2 @ RM 1.4

Collecting POC + DOC @ RM 1.4 P3

1320 set up @ RM 4.2. collecting

POC + DOC @ P1 AS/BS. + did P1

did a duplicate @ 09A-EO4-T042 AS

1341 collect AS @ RM 1.2

1344 collect BS @ RM 4.2

sample is done. Did an
analysis of theLocation Water Column Monitoring Date 10/13/09Project / Client LPR / USACE

09A-EO4-T042-P1-AS/BS

09A-EO4-T042-P2-AS/BS collected

@ 1350 + 1351 respectively.

Note schedule below to collect
morning samples at all locations

Ds

4/5

Arrive @ RM 6.7 @ 2:18. TO 14:10

Sampled for POC + DOC @ P3 @ RM 6.7

1540 Crews return back to yacht club

OSI did CTD + PSI turb, salinity
& conductivityCTD + ACP - factors, corrected just
pressure. @ 10/13/09

see a brown

line @ shop w/ shield in the

QAPP it says between 2 and 3 mg

ent - 1.1 2 pt in all parameters

its all on file

1550/1600 G.M. departs site.

does daily summary

@ 10/13/09

Missou

Location LPR - Benthic / Salinity Date 10/14/09
 Project / Client LPR / USACE

0730 Boat arrives @ Potomac River yacht club. Weather sunny, low 50's, Foggy with observe salinity sampling.

0835 Boat + CPG grab sampler arrive yacht club. 3A, 2E + 2F are the locations we are heading out to.

0855 arrive @ 3A. Photo 1 Salinity grab sampler prior to deployment - CDM observing full chemical screen at dredge prior to sampling @ each location.

0905 - Cruise move to 2F next

3A. Photo 2 decan dredge & containerizing the decan waste.

Research Support Services out of Washington State. is the vessel being used to do grab sampling. Atcom will be out for the duration of the sampling. 10/14/09

Prior to sampling water quality parameters are collected, meter calibrated every day prior to use. Photo 3 grab sampler being retrieved.

10/14/09

Location LPR Benthic / Sediment Date 10/14/09
 Project / Client LPR / USACE

0924 Water quality logs @ LPR02F
 depth 6.8 ft, temp 15.38, pH 7.43,
 cond (us/cm) 24,350, ORP 196, Turb 28.9
 DO mg/l 19.53

Photo 4 - Collecting sample for turbidity @ LPR02F Photo 5 after collection top 6 in the rest of the sample is contained for waste disposal for Batten coming the size box used to grab samples can't fit inside dredge instead we compensate by collecting extra to make up for the skew for this we are using 18x9 in. Note: extra volume being collected for split samples. For EPA / MPT CPG gets salinity of overboard water for serving purposes. Need to have similar salinity for serving water benthos. The values are reported to processors who then make up a solution for serving.

Photo 6 - getting ready to empty dredge of bottom contents. Dredge sample dredge - and photos taken @ 2F

10/14/09

Location LPR Benthos/SedimentDate 10/14/09Project / Client LPR/USACE

For sample @ 2F MPT is not collecting split samples. This was asked by GM if CP6 was collected. For then since they were not in the boat. For then to being placed in a bucket. Samples for VOC, HUS/SEM, TPA, and SDBent are collected.

1050 GM departs CP6 vessel w/ samples

1111 go to CP6 facility to observe processing. Chris For Louts Borge goes on board vessel after GM leaves

1140 GM departs yacht club for CP6 facility to observe processing

1200 GM arrives @ CP6 facility -

speaking w/ Brian (MLI) CP6 will appropriate battery for split & Brian will have forms Amy Marie brings down from today

Photo 7+8 inside set up at crew station

Photo 9 sieve sample

Photo 10 sediment in bucket

Photo 11 homogeneous sediment

As far as sediment samples for split goes Brian only does what is given to him not necessarily everything CP6 is sending to.
 JSM 10/14/09

Location LPR Benthos/SedimentDate 10/14/09Project / Client LPR/USACE

Photo 12 dispensing sample into jar

Photo 13 water recirculating for sieving

Photo 14 decan sample

MPT still filling out some sheet or similar net is located in + info on sheets e.g. sediment color, odor, organic debris, sieve for benthos etc. sediment organt components, e.g. sediment was homogenous & split samples collected

Photo 15 water recirculating

Photo 16 sheet used for split samples

Photo 17 decan/IPW storage area

Amy Marie was doing weekly & daily - via phone conversation w/ teams. By 1320 all at 2F

was processed, jarred, & sieved. The location still hasn't made it back to processing area

1400 GM departs CP6 facility & do daily summary.

10/14/09

JSM 10/14/09

Location LPRDate 10/21/09Project / Client LPR / USACE

0730 GM arrives @ CPG facility & meets w/ Mbe / Koborhe (OK)
 No one from CPG here yet. Two teams heading out on team working 17B, C, D, E @ locations they are floating locations looking for sediment.

*Kant pro sportsman 1st Forest

Plan for today GM will go out on rubber boat MK will stay w/ power grab boat. MPT - Dennis is observing @ 17 - walking locations.

Next week there will be another access from AST w/ power grab - so there will be two crews out here.

CDM crew observing sample collection @ 15E just upstream of CPG facility.

Photo 1 grab vessel

Photo 2 grab vessel

Photo 3 engine to capture if grab takes grab for disposal

Photo 4 grab or retrieval

At upstream location 3 cars were found - ABCOM, MPT & CPG. At 15E no floating debris, no test & chemistry. Location ID LPR F5E-4

10/21/09

Location LPRDate 10/21/09Project / Client LPR / USACE

1000 Depart 15E for facility to drop off samples MK stays behind

1020 Depart dock & had to rescue a skimmer who fell over board - she was OK & we followed her back to CPG

Lock ops were then skimmer was cold but returned

1040 catch back up w/ grab vessel

@ Location 15D - tox test, taxonomy, & chemistry

Photo 4 sieve @ 15D - after sieve crews return to CPG facility & observe processing sample 15D.

1345 CDM depart site as no other sample have come in crews observed the collection of 2 sample & one sample processing

Q5
10/21/09

10/21/09

Location LPR / sediment benthos Date 10/27/09
 Project / Client LPR / USACE

0735 Arrive @ CPG Facility - weather low 50s rain. Two MP2 oversight staff are here today Brian & Kristen Beltronic & Louis Bonger. There will be 1000 issues as big RSS boat & ASD support boat will not be here until ~ 10.00 all overnight staff (LDA + MPD) will go out this morning.

0845 Crews leave CPG Facility & return to work @ 16A - LPR/16A. Fast, clean, benthos, & bioaccumulation. 0945 Oversight crew return back to Facility & MPD & CDA staff will observe processing of samples for chemistry. Field crews are still out on the water trying to finish @ 16A. They are having a hard time collecting good samples, lots of material is sloughing out & they have made multiple attempts so @ LPR/16A oversight activities saw the collection of some buckets for bioaccumulation & chemistry. They are slow going since leaving the location to shoot the same site back only 1500 bucket was collected in about 1 hr.

Location LPR / sediment benthos Date 10/27/09
 Project / Client LPR / USACE

1205 some samples coming to dock from other boat. Some toxology samples arrive from LPR/11A - 2 buckets crews out still collecting CDA overseeing the site @ LPR/11A. Crews are still trying to collect samples @ 16A & 11A. Observing site @ 1345 G.D. departs site as no other sample has arrived & does daily summary report.

10/27/09

10/27/09

Location LPR - PWC monitoring Date 11/9/09Project / Client USACE / LPR

0015 Boat arrives @ Passaic R. - yard X
 club meets w/ Jeff Misurik (AECOM)
 • OSD Steve Bolak + Rusta Kuch

Weather - fair, cool - to be sunny & mid 60s

Plan for today is to do 3 locations - check
 clean, calibrate & re-deploy mooring
 & collect samples

0750 arrive @ RM 14 - crews

navigate to location collect samples
 for 50 yd - pull 3 ft above bottom
 3 ft below surface. Also find a

water column mooring / water
 column profiler - Unit cool factory calibrate
 they check w/ solenoid prior to use
 calibration verification was done yesterday.

After sample collection crew begin

to pull bottom mounted ADCP +
 STD/OBS meters (array)

Photo 1 bottom array being pulled

Photo 2 bottom array on boat prior

to cleaning / servicing. - Array still
 had power - they look OK.

Reo. QALP crew are downloading
 all the data - if done today
 11/9/09

Location LPR - PWC monitoring Date 11/9/09Project / Client USACE / LPR

no calibrations will be performed
 on deployed neters.

Photo 3 - Downloading data

Photo 4 being prior to deployment
 rate 45 ft. - No calibration was
 necessary all equipment is working
 properly

Photo 5 - Servicing ADCP

1010 - Re-deploy bottom-mount array
 will collect water samples soon. - Back
 to calibrating equipment - crews check
 downloaded data for inconsistencies
 do it, they also check it against
 water column profiler data - which is
 calibrated.

1020 - navigate back to location to
 resample after mooring being re-deployed
 locations sample before pulling

09A - E05 - T014 - P3 AS + BS

09A - E09 - T014 - P3 AS + BS

Photo 6 - sampling @ 09A - E09 - T014 - P3 - BS

1050 - Pack up + depart for RM 6.7

1120 Arrive @ RM 6.7

Photo 7 water profile ready for deployment
 11/9/09

Location LPR PWC monitoring Date 11/9/07
Project / Client LPR / USACE

RM 6.7

1130 collect samples @ RM 6.7 - AS sample

1134 collect samples @ RM 6.7 - BS sample

Photo 8 - Retrieval of array @ RM 6.7

Photo 9 - bottom array after retrieval @ RM 6.7

1155 ^{collected} being + missing retrieval

1130 collect samples @ ~~RM 6.7~~ RM 6.7 AS

BS sample after deployment

no re calibration needed all sensors good

1135 Depart RM 6.7

1400 arrive @ RM 10.2 + collect AS

11401 BS

Photo 10 Retrieval of array @ RM 10.2

Note crews did these locations note tides + getting stuck w/ as of bridges wanted to get 3 locations today so they did only array to quota getting caught

Photo 11 YSI from buoy + array is being downloaded + cleared

1420 buoy + array have been pulled + data downloading begins

Note - turb + conduct composed to sensor on depth profiler array - instead the buoy

Location LPR PWC monitoring Date 11/9/07
Project / Client LPR / USACE

39

A bottom array was captured - is inconsistent in data as well as from the calibration would be performed

Note crew doing turbidity calibration on buoy mounted YSI - data shows think sensor malfunction. Crews have a spare YSI - is changed to new instrument

1530 - Deploy depth profiler + mobile collect water sample @ RM 10.2

Finish collecting samples - collection time are as follows 1552 AS + 1553 BS

Full name 09A - E09 - T102 - P1 - AS/BS

1600 - begin ride back to yacht club

1645 Arrive yacht club

1700 Depart yacht club to go home
No daily summary

@ 11/9/07

11/09/07

Location LPR PWC monitoring Date 11/10/09
 Project / Client LPR/USACE

0700 arrive at yacht club. Plan for today was to meet @ CP6 facility & car pool to yacht club w/ Jeff for AECOM as the boat will be stuck on the river for several hrs due to the the plan was to drop us at CP6 & then drive to yacht club to pick up the vehicle. Gnt departed house @ 0530 but couldn't get to facility @ 0630 west ramp was shut him & instead of going into the boat & taking launch in, Jeff & Gnt will meet @ yacht club & stay all day on the boat.

Weather low 60s - partly cloudy.

0715 AECOM + 055 arrive @ yacht club

0745 Depart yacht club 7:41-3512

0800 Arrive @ RM 4.2

0815 09A-E05-T042-AS collected

0824 09A-E05-T042-BS collected

Photo 13 Array immediately after pulled @ RM 4.2 - fishing d/s buoy in btz A.

0905 mooring & buoy pulled @ RM 4.2

1030 mooring & buoy redeployed all instruments were functioning fine.

[Signature] 11/10/09

Location LPR PWC monitoring Date 11/10/09
 Project / Client LPR/USACE

1041 09A-E09-T042-AS collected

1042 09A-E09-T042-BS collected

1045 depart RM 4.2 for 13.5

1125 arrive @ RM 13.5

1130 09A-E05-T135-P3-AS

1130 09A-E05-T135-P3-BS

Photo 14 - Retrieving array @ RM 13.5

Facing right bank

1150 mooring & buoy pulled in After

a check all instrument functioning properly

1305 mooring & buoy re-deployed

1319 09A-E09-T135-P3-AS

1321 09A-E09-T135-P3-BS

1320 - Dup of 09A-E09-T135-P3-AS

Steve Bodaks # 960 395-8493

Also able to get ride to yacht club
 Depart @ 1400. M's tomorrow @ 0615

[Signature] 11/10/09

[Signature] 11/10/09

Location LPR PWC monitoring Date 11/11/09Project / Client LPR/USACE

0600 arrive @ yacht club & meet
with Jeff & AELcom. Weather showers
mid-50s

0605 OSI arrival & begin mobility
to head out

0645 arrive @ RAX 1.4 & begin
transsects

Photo 15 - ADCP deploy @ RM 1.4

0700 09A - E07 - T014 - P1 - AS

0702 09A - E07 - T014 - P1 - BS

0708 09A - E07 - T014 - P2 - AS

0709 09A - E07 - T014 - P2 - BS

0714 09A - E07 - T014 - P3 - AS

0716 " " " " BS

Collected DOC + POC @ P3 AS & BS

0730 Arrive @ RM 4.2 & do transect completion

0739 09A - E07 - T014 - P1 - AS

0741 " " " " BS

0739 " " " " AS POC DOC

0742 " " " " AS POC DOC

0748 " " " " P2 AS

0749 " " " " P2 BS

0755 " " " " P3 AS

0757 " " " " P3 BS

- high water

Location LPR PWC monitoring Date 11/11/09Project / Client LPR/USACE

Crew completed transects & samples
above Dundee yesterday.
0800 Arrive @ RM 6.7 & begin daily
transects. Sample collection time
noted below

0824 09A - E07 - T067 - P1 - AS

0826 " " " " P1 - BS

0830 " " " " P2 - AS

0832 " " " " P2 - BS

0838 " " " " P3 - AS

0841 " " " " P3 - BS

Collecting POC & DOC @ 0839 P3 AS; 0841 P3 BS

Collect DAP @ 09A - E07 - T067 - P3 - BS

0842

0845 crews pull up ADCP & head
back to yacht club

All of the above sample sites are
representative of Ebb tide samples

0915 arrive @ yacht club & crews

prep to head out during flood tide

This morning event more than is according to APD

Back @ yacht club does make a fairly smooth

#15 Crews head out to collect

flood tide samples & transect survey

11/11/09

Location LPR PWC monitoring Date 11/11/89
 Project / Client LPR / USACE

1125 arrive PRC 7.4 & nob for transects
 Samples collected @ the times below

1155 09A - E08 - T014 - P1 - AS

1157 " " " " P2 - BS

Conduct 2.08, Temp 12.64 @ P1 - BS one
 set of various rdgs taken during sampling.

1205 09A - E08 - T014 - P2 - AS

1207 " " " " P2 - BS

1211 09A " " " P3 - AS

1214 " " " " P3 - BS

Cond. 2.07, Temp 12.63 Turb. 46.8 - taken
 @ P2 - BS during various rdgs.

Collecting POC & DOC @ P3 AS & BS @ 1212 & 1215

1215 Return depth sampler & depart for RM 4.3

1225 Arrive P RM 4.3 & begin transect

Sampling. Sample collection time noted below.

1237 09A - E08 - T014²³ - P1 - AS POC: DOC 1238

1240 " " " " P1 - BS POC: DOC 1241

1245 " " " " P2 - AS

1247 " " " " P2 - BS

1250 " " " " P3 - AS

1253 " " " " P3 - BS

Cond. 2.00, Temp 11.1 Turb. 29.4 @ P3 - AS

These are rdgs taken from constant

1211 11/11/89

Location LPR / PWC monitoring Date 11/11/89
 Project / Client LPR / USACE

rdgs during deployment at depth
 sampler.

1255 pairs in depth sampler & depart
 for RM 6.7.

1305 arrived @ RM 6.7 & to
 transect

Photo 16 AEDP deployed @ RM 6.7

1315 Depart RM 6.7 - Crew unable

to grab samples due to incoming tide

was able to do transect; other crew

based @ CPG Facility will get water

samples as if this vessel were

to grab sample we would have

been stuck above the bridge until

51300.

1400 Arrive back @ Passenger jet club

GM reports site.

11/11/89

11/11/89

Location LPR PWC monitoring Date 12/17/09
 Project / Client LPR / USACE

0800 G.M. arrival @ Passic River yacht club, weather sunny high 40s.

0820 Mike Harse AECOM arrives.

Geophy for one sample will be collected

From transects & crews will bring samples back to

CPG Facility

0840 OSI arrives as do tanks w/ other BS & rep.

0915 Depart yacht club

0925 Arrive @ RM 1.4 - Morning

transsects / samples conducted during ebb tide

event. Below are collection times:

0943 09A-E12-T014-P1-AS

0945 " " " " -BS

0952 " " " " P2-AS

0953 " " " " P2-BS

1001 " " " " P3-AS

1002 " " " " P3-BS

Also sample for POC & DOC @ P3AS & BS

Photo 1 - Sample @ RM P3-AS

1010 Depart for RM 4.2

1015 Arrive @ RM 4.2 & begin to mob for

ADEL survey

1025 complete survey.

As of 11/17/09

Location LPR PWC monitoring Date 12/17/09
 Project / Client LPR / USACE

Collection times @ RM 4.2 - full bottom

1027 09A-E12-T042-P1-AS

1029 " " " " -P1-BS

Collect POC & DOC from P1AS & BS.

1034 09A-E12-T042-P2-AS

1037 " " " " P2-BS

1042 " " " " P3-AS

1046 " " " " P3-BS

1050 Depart RM 4.2 for G.7

1100 Arrive @ RM 6.7 & begin ADEL

survey. After survey crews begin to do

sampling @ each interval.

Collection times @ RM 6.7 noted below

1110 09A-E12-T067-P1-AS

1112 " " " " P1-BS

P1-BS did duplicate ID @ 09A-E12-T067-P1-BS

1120 09A-E12-T067-P2-AS

1122 " " " " P2-BS

1129 " " " " P3-AS

1136 " " " " P3-BS

1140 Depart RM 6.7 for yacht club.

1155 Arrive back @ yacht club. Crews

can't go back out until 1/400. G.M. would have

went to CPG Facility to observe parking but

As of 12/17/09

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Location LPR PUC monitoring

Date 12/14/01

Project / Client LPR / USACE

They aren't doing it until late. GM works on tent for Daily reports

1415 Depart yacht club for RM 4.1

1420 Arrive @ RM 1.4

1500 Begin ADCP survey @ RM 1.4

Samples collected @ the following times:

1507 09A-E13-T014-P1-AS

1511 " " " P1-BS

1516 " " " P2-AS

1521 " " " P2-BS

1524 " " " P3-AS

1526 " " " P3-BS

@ RM P3 AS & BS also collected POC & DOC samples

1530 Crews depart RM 1.4 for 4.2

1535 Arrive @ RM 4.2 + begin survey

Samples collected @ the following times:

1547 09A-E13-T042-P1-AS

1549 " " " P1-BS

1 Collect for POC & DOC @ RM 4.2 P1 AS & BS

1555 " " " P2-AS

1556 " " " P2-BS

1603 " " " P3-AS

1605 " " " P3-BS

1610 Depart RM 4.2 for 6.7

July 2001 12/17/01

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Location LPR PUC monitoring

Date 12/14/01

Project / Client LPR / USACE

1615 Arrive @ RM 6.7 + begin ADCP survey

Samples collected @ the following times:

1625 09A-E13-T067-P1-AS

1626 " " " P1-BS

1630 " " " P2-AS

1632 " " " P2-BS

1635 " " " P3-AS

1638 " " " P3-BS

Collecting POC & DOC @ RM 6.7 P3 AS & BS

Dup taken @ P3-BS - ID as BT

1640 Crews depart RM 6.7 for yacht club

1715 Crews arrive @ yacht club

1720 GM departs yacht club for

CPG facility to observe sample gathering

1755 GM arrives @ CPG facility

no one from AECOM here yet.

JMAECOM arrives to he already has

some cooler packed for COCs + GM

observes him generate another for locating

single the morning. GM observes collected

Col for this morning sample collected @

RM 13.5 P1 AS & BS, P2 AS & BS, P3 AS, P3 BS,

RM 02 P1 AS + P1 BS - All for TSS & 135 P3 AS & BS

also for DOC & POC @ RM 100 P1 AS & BS POC & DOC

12/17/01

Location LPR PWC monitoring

Date 12/14/09

Project / Client LPR / USACE

all sample on printed out charts, cadon
w/ custody seals & packed on ice.

Photo 2 CoC for cooler completed

Crews unable to ship all samples as 1st later
will hold ISS overnight on ice; DOC & POC
will be shipped tonight. Get observing chart &
custody seals.

Photo 3 Filling out labels & making CoC

Photo 4 packing samples

Photo 5 bag ice

Chain of custody has been signed & QC of
samples better than 1st cadon. 1 chain
per cooler. Samples get placed in a garbage
bag after being closed in a ziploc bag &
bag ice is added. Filled bag placed
custody seals on the cooler.

1115 GM departs GPB facility

lgm

12/14/09

Location LPR PWC monitoring

Date 12/15/09

Project / Client LPR / USACE

0800 GM arriving @ yacht club - weather
cloudy, chance of showers high low 50's
OSI was supposed to be here for around 8.

0820 Mike Thayer AECOM arrival

0835 OSI arrives

0915 Crews depart yacht club for RM 13.5

1010 Arrive @ RM 13.5

At location above Dunlop Dam - they will do

transsects & sample & pull nearby

Water meter w/ RM 13.5 being in
background. Samples collected prior to retreat
are as follows:

1017 CGA - E10 - T135 - P3 AS

1019 " " " P3 BS

collected dry @ P3 AS @ 1017

Photo ADCP moving after retrieval getting
brushed off before coming into boat. All instrument
functioning fine.

1125 depart RM 13.5 for RM 10.2

1135 Arrive @ RM 10.2. Samples collected
prior to retrieval are as follows:

1152 CGA - E10 - T102 - P1 AS

1155 " " " P1 BS

Photo mooring retrieval @ RM 10.2 at 11:55 hours
lgm 12/15/09

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Location LPR PWC monitoring
Project / Client LPR / USACE

Date 12/15/09

1300 Depart RM 10.2 For 6.7

1325 Arrive @ RM 6.7 - All instruments
from RM 10.2 were functioning fine

Samp's collected prior to retrieval of moorings as follows

1336 09A-E10-T067-P3-AS

1338 " " " P3-BS

7.5 depth, 21.6 temp, 21.4 salinity

3.03 temp. - real time obs while

sample @ T067-P3-BS - obs are

real time & are constantly changing

1425 Depart RM 6.7 For yacht club.

all mooring & buoy @ RM 13.5, 10.2 & 6.7 recovered

1500 Arrive back @ yacht club & deposit samples

12/15/09

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Location LPR PWC monitoring
Project / Client LPR / USACE

Date 12/16/09

0800 G.M. arrives @ yacht club - war the
Suning high 30s & windy forecasted

0800 AELon Jeff arrives

0820 OST arrives crew unbed mooring
& buoys from yesterday0915 Crews depart yacht club for RM 1.4 -
doing this one first as the tide is
more slack. Prior to retrieval
samples are collected & ID as follows:

0933 09A-E10-T014-P3-AS

0935 " " " P3-BS

Photo 1 Sampling @ RM 14 PS AS

Photo 2 Water quality & depth instrument

Sea bird electronics & VSI in situ

Photo 3 Hook used to dig for mooring line

Photo 4 ACP mooring after retrieval @ RM 1.4

1025 Mooring & buoy retrieval

1030 Depart RM 1.4 For RM 4.2

1035 Arrive @ RM 4.2 Crew begin reeling
for sampling prior to retrieval of moorings
& buoys Sample collected as follows:

1050 09A-E10-T042-P1-AS

1051 " " " P1-BS

Photo 5 Deployed instrument for sampling
John 1/16/09

Location LPR PWC monitoring Date 12/16/09
Project / Client LPR / USACE

After sample collection crew began to prep to
take out mooring & buoy. All instruments from
both locations were functioning fine
Photos buoy retrieval (PM 4:25) YSE attached
1225 all gear retrieved - issues w/
locating buoy line. & had to go to
yacht club.
1300 unload gear & depart yacht club
to duty station, download files & work complete survey.

Q

12/16/09